

## ALTAY POLIMETALI ENVIRONMENTAL AND SOCIAL ACTION PLAN (ESAP)

13 November 2014

Nr	PR	PR Requirement / Issue	Non-compliance areas	Action	Responsibilities / Resources	Completion Date
1	1, 2	EHS integrated management system (IMS)	EHS IMS is missing	Implement Environment, Health and Safety (EHS) integrated management system according to ISO 14001 and OHSAS 18001:2007; recommendations including but not constraining to the following items: 1. Appoint EHS manager at construction/operation site, make them accountable to the company director to avoid conflicts of HS and production interests; 2. Define the legislative requirements 3. Determine the risk and impact aspects 4. Develop EHS plans and report their implementation regularly 5. Maintain EHS documentation at site and provide it in electronic copies to the headquarters	1. General Director EHS Manager	31.03.2015
				Draft the policy with commitment to continuous improvement in EHS with the efforts scalable to the risks involved	General Director	31.12.2014
2	1	EHS appraisal	Local EIA misses site specific ecological and social baseline data	Conduct hydrobiological survey of the Karasu River above and below the dam. Check invertebrates in the Saumalkol Lake water and sediment. Identify the dam and water exchange and obstruction impact and develop mitigation measures Survey soil, plants and wildlife including the lake waterfowl Collect local social baseline data and include it in EIA	External consultant EHS Manager	31.05.2015
3	1		Analogy data from other rivers cannot be used for water supply substantiation	Follow the actions prescribed by the conclusion of the Nura-Saury Basin Water Resources Management Inspection on the water supply feasibility study: Conduct hydrogeological and topographical assessment of the Karasu River and Saumalkol Lake including high water period, and prepare their passports. Provide detailed design of the pipelines and the berm and its components	External consultant EHS Manager	31.05.2015
4	1		Mine development projects have not been approved by regulatory authorities	Obtain necessary approvals including permit for the river and lake water obstruction and all other outstanding regulatory documentation. Submit a plan to the Bank detailing the actions required and the proposed timelines and deadlines.	Chief Designer	TBD
6	1		No data on off-balance ore, waste rock and tailing paste composition, paste leachate tests inadequate	Run appropriate leaching tests on dried paste to obtain sufficient data for justification of exclusion of a dam and a liner	External lab	TBD
7	1		Managing contractors	Contractors EHS performance is not managed adequately	A Contractor's Management Plan shall be drafted and shall include but not be limited to the following items. EHS requirements shall be specified in tender documents and contracts and adherence to contract conditions checked regularly by a contract supervisor. Contractors' workers shall be easily identified by a company unique clothes and labels.	Procurement department

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8	2	Provision of workers with the healthy work environment	Sanitary conditions are not adequate	1. Provide sanitary conditions according to the minimum requirements (Appendix 1) to all workers including contractors. E.g. provide warm toilets, eating and warming up places for the outdoor workers. 2. Regularly inspect hygiene places conditions	1. Design and construction 2. EHS Manager	30.11.2014
9	2	Safe use and management of hazardous substances and materials	None during construction Potential of chemical dust inhalation at storage and application places	1. If hazardous substances are procured or produced in powder form, ensure that their storage and application places have adequate dust control devices. 2. Enforce use of PPE required by the substances MSDSs	1. Design and construction 2. EHS Manager	Before powder substances are procured
10	2	Personnel injury prevention and reduction of its consequences	No worker medical assessment before shifts. No medical emergency rescue provisions from site	Arrange for a nurse and an ambulance with the ability to care for diseased or injured on the way to the hospital. The nurse is to conduct medical examinations before shifts	Site Director, procurement and HR departments	31.12.2014
11			Some workers do not use PPE (hard hats, boots, welder suits) where needed. PPE often uncomfortable, poorly protects from cold and wind and supplied with delays	Provide PPE to all workers and enforce its use. Pay specific attention to PPE ergonomics and its suitability to extreme climatic conditions	Procurement department EHS Manager	Continuous
12			Not all required safety briefings conducted and contractor's briefings not controlled.	Conduct safety briefings according to legislative requirements. Keep records. Control contractor's briefing and medical examination records.	EHS Manager	30.11.2014
13			Safety training is not conducted and contractors training not controlled.	Conduct safety training and obtain certificates for all workers according to legislative requirements. Keep records. Control contractor's training and certification records.	External course EHS Manager	30.11.2014
14			Road safety is not maintained	Maintain road safety: apply sand to sloping surfaces when ice is present, construct berms along embankments higher than 1.5m. Enforce use of safety belts	Site Director	Continuous
15			Vehicles parking is not arranged	Arrange vehicles parking to separate large and small vehicles and minimise reverse	Site Director	30.11.2014
16			2	Job security	No workers representatives, no collective or individual contracts	Develop a collective contract and agree it with worker's representatives
17	2	Grievance mechanism /	No internal grievance mechanism, legally obliged	Include to the corporate ethics policy the worker right to complain without retribution (a whistleblower rights).	CLO	30.12.2014

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		Internal stakeholder engagement	grievance procedures not disclosed and not used.	Develop worker grievance mechanism according to EBRD requirements. Process anonymous complaints. Include the record on whether a complaining party is satisfied with the given answer. Inform the employees on mechanism and changes made.		
18	2,3,4	Emergency preparedness and response	Hazards and risks not identified. Fire prevention and response plans not developed.	Identify risks. Include risks for oil/diesel spills and heating failure in extreme cold. Develop and implement Emergency Prevention and Response Plan, covering identified risks.	EHS manager	31.03.2015
19			Fire engines are too far to enable adequate response	Procure two fire engines and train personnel to operate them and provide them with reliable communication. At all sites provide firewater storage and access to it sufficient to refill a fire engine tank before the second tank is emptied.	Site Director / Procurement Department	31.03.2015
20			No firefighting equipment at work and living sites	Install firefighting equipment at all work and living sites including mobile welding stands. Control their conditions regularly.	EHS Manager	30.11.2014
21	3	Pollution prevention and abatement	No provision for monitoring impact from off-balance ore, waste rock, paste tailings	Commission qualified hydrogeologist to plan and install monitoring wells, conduct quarterly monitoring for the expected to be leached metals: Mg, Al, Mn, Zn, Cr3+, Cr 6+, Cd, Co, Ni at the off-balance ore, waste rock and paste tailings stockpiles and at Ayyr village well. Use baseline concentrations, RoK MPCs and the Dutch Target and Intervention Values to assess contamination. Draft a methodology to respond to situations where groundwater contamination is identified. This methodology should include description on the decision processes around delineating and evaluating contamination conditions and the process around determining mitigation actions	External hydrogeologis EHS Manager	31.03.2015
22			Oil drums and diesel tank placed on the ground. Minor spills not cleaned	Equip the hazardous materials and wastes storing places with water-proof surface with a roof to redirect rainwater and a berm to prevent knocking off the tanks and leakage (secondary) containment. The berm should hold 110% of the biggest tank volume or 25% of the maximum storage volume.	Site Direcotr / Construction contractor	31.03.2015
23			Camp and work place sewage disposed in the ground	1. Cease sewage dumping into the ground. Construct temporary (removable) and permanent septic tanks to avoid leakages and overflows. 2. Construct sewage treatment facility.	Site Direcotr / EHS Manager	1. 31.12.2014 2. 31.03.2015
24			Vehicles are washed in the stream at the sand washer	Construct vehicles washing pads with drainage collection. Consider water reuse, water heating and warm enclosure for washing in cold weather.	Site Direcotr / Construction contractor	31.03.2015

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25	3	Reduction of waste quantity and its impact	Hazardous waste is not managed. No waste documentation. Minor oil spills at the office area	Develop a Waste Management Plan which covers all waste production, handling, recycling/treatment, and disposal activities and review of alternatives for disposal. Inventory hazardous waste (e.g. fluorescent lamps, oiled cloth, contaminated ground and oil swapping sand). Collect hazardous waste in separate labelled containers. Develop waste documentation required by legislation including contracts on all types of waste disposal and procedures for waste consignment: way-bills etc. Include in the environmental protection plan waste reduction targets.	EHS Manager	31.01.2015
26				Check hazardous waste's fate beyond the contract with a waste removing company to ensure safety for the contractor's staff and population and adherence to the waste handling license.	EHS Manager	31.01.2015
27	4	Community health, safety and security	Blasting dust cloud may reach Ayyr village (4km away) during frequently occurring south (17%) and southwest (31%) winds	Use dust measuring tablet and visual observation during blasting during adverse wind conditions to evaluate the impact. Disclose results to the local stakeholders. Ask the village nurse to record health complaints that may relate to blasting dust emission	EHS Manager CLO	From start of blasting until complaint is sorted
28	5	Involuntary Resettlement and Economic Displacement	Full compliance but potential to impinge on 2 Terekty houses land and affect cattle water supply	Ensure that two houses inside the Administrative and housing estate retain 0.15ha of land each they are entitled. Monitor output of springs at Opyrmaly and Balagazy farms and wells at Ayyr and Terekty villages.	Construction	31.12.2014
29	6	Biodiversity conservation	EIA environmental control measures do not include ecological monitoring	Monitor Karasu River and Saumalkol Lake ecology once a year at the time of the highest possible impact.	EHS Manager	End of each year
30	6	Sustainable use of natural resources	Measures and targets for water and other resources use reduction are not established	Add to corporate policy the commitment to continuous improvement in resource efficiency.	General Director	31.12.2014
31				Include into the environmental protection plans resource use reduction including electricity.	EHS Manager	10.01.2015
32	8	Potential archaeological finds	Archaeological survey of the affected area has not been conducted	Conduct non-intrusive archaeological survey of the land that can be potentially disturbed by the project and obtain the State Conclusion. If artefacts are found during construction earthwork, commission a qualified archaeologist to investigate the find before continuing the earthwork.	External consultant EHS Manager	Continuous
33	10	Stakeholder engagement	Stakeholders not identified. Engagement plans not prepared, no regular stakeholder engagement.	Develop stakeholder engagement plan with stakeholders profile and points of contact, concerns and expectations, grievance handling mechanism form of communication and resources required for plan implementation. Update SEP in line with changes in design and operation. Updated plan shall be approved by the management along with approval of conceptual plans of major process modifications	CLO	1. 15.10.2014 2 weeks after change approved